AMENDMENT TO THE CLAIMS

Claims 1-22 (cancelled)

23. (Currently Amended) A biologically pure bacterial culture of *M. elsdenii* ~~having substantially the same~~ displaying at least a 97% similarity to a 16S ribosomal RNA sequence as that of the *M. elsdenii* strain deposited at NCIMB, Aberdeen, Scotland, UK under number NCIMB 41125 and a growth rate of at least $0.938h^{-1}$.

24. (Previously Presented) ~~The~~ A biologically pure bacterial culture of ~~claim 23 that is the~~ *M. elsdenii* strain deposited at NCIMB, Aberdeen, Scotland, UK under number NCIMB 41125.

25. (Cancelled)

26. (Currently Amended) The biologically pure bacterial culture of claim 23 which is further characterised by its ability to utilize lactate ~~efficiently~~ at a rate of between 40% and 90% in the presence of sugars.~~; its resistance to ionophores; its relatively high growth rate; its capability to produce predominantly acetate; and its capability to proliferate at pH values as low as 4.5.~~

27. (Currently Amended) A composition for facilitating the adaptation of ruminants from a roughage-based diet to a high-energy concentrate-based diet, the composition comprising the bacterial culture of ~~claim according to claim 25~~ claim 23.

28. (Previously Presented) A method for facilitating the adaptation of ruminants from a roughage-based diet to a high-energy concentrate-based diet, the method comprising administering to the rumen of said ruminants an effective amount of the composition of claim 27.

29. (Currently Amended) A feed-additive for ruminants comprising a carrier and an effective amount of the bacterial culture of ~~claim 25~~ claim 23.

30. (Previously Presented) A feed-additive according to claim 29 wherein the culture is disposed in an anaerobic container.

31. (Currently Amended) A method for the treatment of ruminal lactic acidosis comprising anaerobically administering to the rumen of a ruminant an effective amount of a bacterial culture according to ~~claim 25~~ claim 23.

32. (Previously Presented) The method of claim 31 wherein the treatment prevents at least one ruminal lactic acidosis, rumenitis, ruminal lactic acidosis induced laminitis, ruminal lactic acidosis induced bloat and liver abscesses.

33. (Currently Amended) A composition for the treatment of ruminal lactic acidosis comprising an effective amount of a bacterial culture according to ~~claim 25~~ claim 23.

34. (Previously Presented) A composition of claim 33, wherein the treatment prevents at least one of ruminal lactic acidosis, ruminitis, ruminal lactic acidosis induced laminitis, ruminal lactic acidosis induced bloat and liver abscesses in ruminants.

35. (Currently Amended) A preparation for the treatment of ruminal lactic acidosis comprising an inoculum of a bacterial culture according to ~~claim 25~~ claim 23 and a sterile anaerobic growth medium.

36. (Previously Presented) The preparation of claim 35 wherein the culture and the medium are disposed in separate chambers of an anaerobic container, wherein the chambers are anaerobically connectable to each other.

37. (Previously Presented) The preparation of claim 36, wherein the preparation prevents at least at least one of ruminal lactic acidosis, ruminitis, ruminal lactic acidosis induced laminitis, ruminal lactic acidosis induced bloat and liver abscesses in ruminants.

38. (Currently Amended) A method of achieving in [[a]] ruminant at least one of increased milk production; improved feedlot performance; improved growth rate; decrease in finishing time; lower digestive morbidity and mortality; lower incidence of lactic acidosis and related diseases; improved feed conversion efficiency; decrease in roughage content in feeds; and

capability to feed on relatively higher concentrate diets, the method comprising administering to the rumen of a ruminant an effective amount of a bacterial culture of ~~claim 25~~ claim 23.

39. (Previously Presented) A method according to claim 38 wherein the culture is administered anaerobically.

40. (Currently Amended) A method of isolating a biologically pure culture of ~~a ruminal microorganism~~ *M. Elsdenii*, the method comprising obtaining a sample of ruminal fluids; and cultivating the sample on a growth medium, the method being characterised in that a plurality of parameters selected from the group comprising growth medium constituents, dilution rate, pH, temperature, anti-microbial agents, gaseous environment, redox potential, lack of nutrients and challenging organisms, are pre-selected ~~to~~ in favour of ~~a superior rumen microorganism~~ *M. elsdenii* according to claim 23, to the detriment of ~~inferior~~ other rumen microorganisms.

41. (Previously Presented) A bacterial culture of *M. elsdenii* produced according to the method of claim 40.

42. (Previously Presented) A composition for facilitating the adaptation of ruminants from a roughage-based diet to a high-energy concentrate-based diet, the composition comprising the bacterial culture of claim 41.

43. (Previously Presented) A method for facilitating the adaptation of ruminants from a roughage-based diet to a high-energy concentrate-based diet, the method comprising administering to the ruminant an effective amount of the composition of claim 42.

44. (Previously Presented) A feed additive for ruminants comprising the culture of claim 41.

45. (Previously Presented) A method for the treatment of ruminal lactic acidosis comprising administering to the ruminant an effective amount of the composition of claim 42.

46. (Previously Presented) The method of claim 45, wherein the treatment prevents at least one of ruminal lactic acidosis, rumenitis, ruminal lactic acidosis induced laminitis, ruminal lactic acidosis induced bloat and liver abscesses.

47. (Previously Presented) A composition for the treatment of ruminal lactic acidosis comprising the culture of claim 41.

48. (New) The biologically pure bacterial culture of claim 23, which is further characterised by its resistance to ionophores.

49. (New) The biologically pure bacterial culture of claim 23, which is further characterised by its capability to produce predominantly acetate.

50. (New) The biologically pure bacterial culture of claim 23, which is further characterised by its ability to proliferate at pH values as low as 4.5.

51. (New) The method according to claim 42, wherein the pre-selected growth medium is selected from the group consisting of semi-defined rumen fluid free medium, incubated rumen fluid lactate medium (IRFL), SDL medium, SDG medium, SDM medium, CSL 4 medium and CSL 6 medium.

52. (New) The method according to claim 42, wherein the growth medium constituents are selected from the group consisting of dH_2O, Na-lactate, agar, sodium-D, L-lactate solution, bromocresol purple solution, peptone, KH_2PO_4, $(NH_4)_2SO_4$, $MgSO_4$, $CaCl_2$, vitamins (including pyridoxolhydrochloride, pyridoxamine, riboflavin, thiaminchloride, nicotinamide, Ca-D-pantothenate, aminobenzoic acid, biotin, folic acid and cyanocobalamin), trace mineral solution, mineral solution, Na_2S, cysteine, antifoam, monensin, maltose, glucose, indigocarmine, yeast extract, CSL, KOH and L-cysteine.

53. (New) The method according to claim 42, wherein the pH is selected between 4.5 and 6.5.

54. (New) The method according to claim 42, wherein the temperature is selected between 4°C and 50°C.

55. (New) The method according to claim 42, wherein the anti-microbial agents are selected from the group consisting of lasalosid and monensin.

56. (New) The method according to claim 42, wherein the gaseous environment is CO_2.

57. (New) The method according to claim 42, wherein the challenging organism is a challenging ruminal organism selected from a total rumen population from an animal adapted to high energy diets.